

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [62 FR 3200 NO. 14 01/22/97]

[Docket No. 96-CE-46-AD; Amendment 39-9884; AD 97-01-13]

Airworthiness Directives; Cessna Aircraft Company 100, 200, 300, and 400 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

**SUMMARY:** This amendment adopts a new airworthiness directive (AD) that applies to Cessna Aircraft Company (Cessna) 100, 200, 300, and 400 series airplanes. This action requires checking the airplane maintenance records for any fuel, oil, or hydraulic hose, Cessna part number (P/N) S51-10, replaced between March 1995 and February 3, 1997 (the effective date of this AD); immediately checking any of these hoses for a diagonal or spiral external reinforcement wrap; and immediately replacing any of these hoses that have a diagonal or spiral external reinforcement wrap with one that has a criss-cross external reinforcement wrap. This action was prompted by reports of operators experiencing a loss of engine power because of low fuel feed, in addition to Cessna discovering that the rubber hose installed at the factory on certain Cessna Models 208 and 208B airplanes was defective. The Cessna P/N S51-10 rubber hose is utilized on fuel, oil, and hydraulic hoses on the affected airplanes. The actions specified by this AD are intended to prevent fuel, oil, or hydraulic systems failure caused by a collapsed hose.

**DATES:** Effective February 3, 1997.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of February 3, 1997.

Comments for inclusion in the Rules Docket must be received on or before March 17, 1997.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), Central Region, Office of the Assistant Chief Counsel, Attention: Rules Docket 96-CE-46-AD, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106.

Service information that applies to this AD may be obtained from Cessna Aircraft Company, Product Support, P.O. Box 7706, Wichita, Kansas 67277, telephone (316) 941-7550; facsimile (316) 942-9006. This information may also be examined at the Federal Aviation Administration (FAA), Central Region, Office of the Assistant Chief Counsel, Attention: Rules Docket 96-CE-46-AD, Room 1558, 601 E. 12th Street, Kansas City, Missouri 64106; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** John C. Pearson, Aerospace Engineer, FAA, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas 67209; telephone (316) 946-4134, facsimile (316) 946-4407.

**SUPPLEMENTARY INFORMATION:**

**Discussion**

The FAA has recently received several incident reports of fuel flow blockage to the engines of certain Cessna 208 series airplanes. Examination of the Cessna part number (P/N) S51-10 rubber hoses installed on these airplanes revealed a deterioration to the point of delamination of the inner tube from the external wrap. This rubber hose is utilized on fuel, oil, and hydraulic hoses on Cessna 100, 200, 300, and 400 series airplanes. This kind of deterioration eventually causes the rubber hose to collapse, which could result in failure of the fuel, oil, or hydraulic systems.

Further investigation revealed this particular rubber hose was manufactured by Buckeye Rubber Products Company in January 1995, and Cessna purchased 300 feet of this hose for factory installation on certain Cessna Models 208 and 208B airplanes between March 1995 and June 1995. The remaining portion of hose was distributed in March 1995 as replacement hose. With this in mind, the Cessna P/N S51-10 hose could be installed by field approval on any Cessna 100, 200, 300, and 400 series airplanes, as well as at manufacture on certain Cessna Models 208 and 208B airplanes.

## Relative Service Information

Cessna has issued the service bulletins presented below, which include ACCOMPLISHMENT INSTRUCTIONS for (1) checking for the installation of fuel, oil, and hydraulic hoses, Cessna P/N S51-10, with a diagonal or spiral external reinforcement wrap, and (2) replacing any of these hoses that have a diagonal or spiral external reinforcement wrap with one that has a criss-cross external reinforcement wrap:

- REIMS/CESSNA Service Bulletin (SB) CAB96-21, dated October 18, 1996; Model Affected: F406

- Cessna Aircraft Company SB CQB96-3, dated October 18, 1996; Model Affected: 425

- Cessna Aircraft Company SB SEB96-15, dated October 18, 1996; Models Affected: 150, 150A, 150B, 150C, 150D, 150E, 150F, 150G, 150H, 150J, 150K, 150L, 150M, A150K, A150L, A150M, F150F, F150G, F150H, F150J, F150K, F150L, F150M, FA150K, FA150L, FRA150L, FRA150M, 152, A152, F152, FA152, 172, 172A, 172B, 172C, 172D, 172E, 172F, 172G, 172H, 172I, 172K, 172L, 172M, 172N, 172P, 172Q, FP172, F172D, F172E, F172F, F172G, F172H, F172K, F172L, F172M, F172N, F172P, FR172E, FR172F, FR172G, FR172H, FR172J, FR172K, 175, 175A, 175B, 175C, P172D, R172E(T41), R172F(T41), R172G(T41), R172H(T41), R172J, R172K, 172RG, 177, 177A, 177B, 177RG, F177RG, 180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K, 182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, F182P, F182Q, FR182, R182, T182, TR182, 185, 185A, 185B, 185C, 185D, 185E, A185E, A185F, 188, 188A, 188B, A188, A188A, A188B, T188C, 206, U206, U206A, U206B, U206C, U206D, U206E, U206F, U206G, TU206A, TU206B, TU206C, TU206D, TU206E, TU206F, TU206G, P206A, P206B, P206C, P206D, P206E, TP206, TP206A, TP206B, TP206C, TP206D, TP206E, 207, 207A, T207, T207A, 210, 210-5 (205), 210-5A (205A), 210A, 210B, 210C, 210D, 210E, 210F, 210G, 210H, 210J, 210K, 210L, 210M, 210N, 210R, P210N, P210R, and T210F.

- Cessna Aircraft Company SB CAB96-15, Revision 1, October 18, 1996; Models Affected: 208 and 208B.

- Cessna Aircraft Company SB MEB96-10, dated October 18, 1996; Models Affected: T303, 310P, 310Q, 310R, T310P, 310Q, 310R, 335, 336, 337, 337A, 337B, 337C, 337D, 337E, 337F, 337G, 337H, F337E, F337F, F337G, F337H, FT337E, FT337F, FT337GP, FT337HP, FTB337, T337B, T337C, T337D, T337E, T337F, T337G, T337H, T337H-SP, M337B, P337H, 340, 340A, 401, 401A, 401B, 402, 402A, 402B, 402C, 404, 411, 411A, 414, 414A, 421, 421A, 421B, and 421C.

## The FAA's Determination

After examining the circumstances and reviewing all available information related to the incidents described above, including the referenced service information, the FAA has determined that AD action should be taken to prevent fuel, oil, or hydraulic systems failure caused by a collapsed hose.

### Explanation of the Provisions of This AD

Since an unsafe condition has been identified that is likely to exist or develop in other Cessna 100, 200, 300, and 400 series airplanes of the same type design, the FAA is issuing an AD. This AD requires checking the airplane maintenance records for any fuel, oil, or hydraulic hose, Cessna part number (P/N) S51-10, replaced between March 1995 and February 3, 1997 (the effective date of this AD); immediately checking any of these hoses for a diagonal or spiral external reinforcement wrap; and immediately replacing any of these hoses that have a diagonal or spiral external reinforcement wrap with one that has a criss-cross external reinforcement wrap. Accomplishment of the hose check and replacement is required in accordance with the service bulletins referenced previously.

### Determination of the Effective Date of the AD

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for public prior comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

### Compliance Time of This AD

The compliance time of this AD is presented in calendar time and hours time-in-service (TIS). Delamination of the rubber hose inner tubing and separation of the inner tube from the external wrap is caused by an error in manufacturing. This condition can develop regardless of whether the airplane is in flight. The breakdown of the hose may not be noticed initially, but as the hose continues to erode, collapse is inevitable, which could result in fuel, oil, or hydraulic

systems failure. For these reasons, the FAA is requiring a compliance time of specific hours TIS and calendar time (the prevalent one being that which occurs first).

### **Comments Invited**

Although this action is in the form of a final rule that involves requirements affecting immediate flight safety and, thus, was not preceded by notice and opportunity to comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 96-CE-46-AD." The postcard will be date stamped and returned to the commenter.

### **Regulatory Impact**

The regulations adopted herein will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and is not a significant regulatory action under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket (otherwise, an evaluation is not required). A copy of it, if filed, may be obtained from the Rules Docket.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 USC 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. Section 39.13 is amended by adding a new airworthiness directive (AD) to read as follows:

#### **97-01-13 CESSNA AIRCRAFT COMPANY:** Amendment 39-9884; Docket No. 96-CE-46-AD.

Applicability: All serial numbers of Models 150, 150A, 150B, 150C, 150D, 150E, 150F, 150G, 150H, 150J, 150K, 150L, 150M, A150K, A150L, A150M, F150F, F150G, F150H, F150J, F150K, F150L, F150M, FA150K, FA150L, FRA150L, FRA150M, 152, A152, F152, FA152, 172, 172A, 172B, 172C, 172D, 172E, 172F, 172G, 172H, 172I, 172K, 172L, 172M, 172N, 172P, 172Q, 172RG, FP172, F172D, F172E, F172F, F172G, F172H, F172K, F172L, F172M, F172N, F172P, FR172E, FR172F, FR172G, FR172H, FR172J, FR172K, P172D, R172E(T41), R172F(T41), R172G(T41), R172H(T41), R172J, R172K, 175, 175A, 175B, 175C, 177, 177A, 177B, 177RG, F177RG, 180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K, 182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, F182P, F182Q, FR182, T182, R182, TR182, 185, 185A, 185B, 185C, 185D, 185E, A185E, A185F, 188, 188A, 188B, A188, A188A, A188B, T188C, 206, P206A, P206B, P206C, P206D, P206E, TU206A, TU206B, TU206C, TU206D, TU206E, TU206F, TU206G, TP206, TP206A, TP206B, TP206C,

TP206D, TP206E, U206, U206A, U206B, U206C, U206D, U206E, U206F, U206G, 207, 207A, T207, T207A, 208, 208B, 210, 210A, 210B, 210C, 210D, 210E, 210F, 210G, 210H, 210J, 210K, 210L, 210M, 210N, 210R, T210F, P210N, P210R, 210-5 (205), 210-5A (205A), T303, 310P, 310Q, 310R, T310P, 310Q, 310R, 335, 336, 337, 337A, 337B, 337C, 337D, 337E, 337F, 337G, 337H, F337E, F337F, F337G, F337H, FT337E, FT337F, FT337GP, FT337HP, FTB337, T337B, T337C, T337D, T337E, T337F, T337G, T337H, T337H-SP, M337B, P337H, 340, 340A, 401, 401A, 401B, 402, 402A, 402B, 402C, 404, F406, 411, 411A, 414, 414A, 421, 421A, 421B, 421C, and 425 airplanes, certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (g) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated in the body of this AD, unless already accomplished.

To prevent fuel, oil, or hydraulic systems failure caused by a collapsed hose, accomplish the following:

(a) Within the next 60 hours time-in-service or within the next 60 calendar days, whichever occurs first, check the airplane maintenance records for any fuel, oil, or hydraulic hose, Cessna part number (P/N) S51-10, replaced between March 1995 and February 3, 1997 (the effective date of this AD).

(b) Prior to further flight after the check required by paragraph (a) of this AD, physically check any fuel, oil, or hydraulic hose, Cessna P/N S51-10, that has been replaced between March 1995 and February 3, 1997 (the effective date of this AD) for a diagonal or spiral external reinforcement wrap in accordance with the ACCOMPLISHMENT INSTRUCTIONS of the applicable service bulletin presented below:

(1) REIMS/CESSNA Service Bulletin (SB) CAB96-21, dated October 18, 1996; Model Affected: F406

(2) Cessna Aircraft Company SB CQB96-3, dated October 18, 1996; Model Affected: 425

(3) Cessna Aircraft Company SB SEB96-15, dated October 18, 1996; Models Affected: 150, 150A, 150B, 150C, 150D, 150E, 150F, 150G, 150H, 150J, 150K, 150L, 150M, A150K, A150L, A150M, F150F, F150G, F150H, F150J, F150K, F150L, F150M, FA150K, FA150L, FRA150L, FRA150M, 152, A152, F152, FA152, 172, 172A, 172B, 172C, 172D, 172E, 172F, 172G, 172H, 172I, 172K, 172L, 172M, 172N, 172P, 172Q, FP172, F172D, F172E, F172F, F172G, F172H, F172K, F172L, F172M, F172N, F172P, FR172E, FR172F, FR172G, FR172H, FR172J, FR172K, 175, 175A, 175B, 175C, P172D, R172E(T41), R172F(T41), R172G(T41), R172H(T41), R172J, R172K, 172RG, 177, 177A, 177B, 177RG, F177RG, 180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K, 182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, F182P, F182Q, FR182, R182, T182, TR182, 185, 185A, 185B, 185C, 185D, 185E, A185E, A185F, 188, 188A, 188B, A188, A188A, A188B, T188C, 206, U206, U206A, U206B, U206C, U206D, U206E, U206F, U206G, TU206A, TU206B, TU206C, TU206D, TU206E, TU206F, TU206G, P206A, P206B, P206C, P206D, P206E, TP206, TP206A, TP206B, TP206C, TP206D, TP206E, 207, 207A, T207, T207A, 210, 210-5 (205), 210-5A (205A), 210A, 210B, 210C, 210D, 210E, 210F, 210G, 210H, 210J, 210K, 210L, 210M, 210N, 210R, P210N, P210R, and T210F.

(4) Cessna Aircraft Company SB CAB96-15, Revision 1, October 18, 1996; Models Affected: 208 and 208B.

(5) Cessna Aircraft Company SB MEB96-10, dated October 18, 1996; Models Affected: T303, 310P, 310Q, 310R, T310P, 310Q, 310R, 335, 336, 337, 337A, 337B, 337C, 337D, 337E, 337F, 337G, 337H, F337E, F337F, F337G, F337H, FT337E, FT337F, FT337GP, FT337HP, FTB337, T337B, T337C, T337D, T337E, T337F, T337G, T337H, T337H-SP, M337B, P337H, 340, 340A, 401, 401A, 401B, 402, 402A, 402B, 402C, 404, 411, 411A, 414, 414A, 421, 421A, 421B, and 421C.

NOTE 2: Figure 1 of this AD is included to show the diagonal or spiral external reinforcement wrap on the hose that is referenced in the check required by paragraph (b) of this AD.

(c) Prior to further flight after the check required by paragraph (b) of this AD, replace any Cessna P/N S51-10 that has a diagonal or spiral pattern external reinforcement wrap with a Cessna P/N S51-10 hose that has a criss-cross pattern external wrap. Accomplish this replacement in accordance with the ACCOMPLISHMENT INSTRUCTIONS of the applicable service bulletin in paragraph (b) of this AD.

NOTE 3: Cessna Model 208 airplanes (serial number 20800241 through 20800258) and Model 208B (serial number 208B0416 through 208B0560) had Cessna P/N S51-10 hoses with a diagonal or spiral external reinforcement wrap installed at manufacture. All other airplanes may have had the hose installed by field approval. Cessna determined that these hoses were available for distribution between March 28, 1995 and June 28, 1996.

(d) As of the effective date of this AD, no person shall install a fuel, oil, or hydraulic hose having Cessna P/N S51-10 with a diagonal or spiral external reinforcement wrap.

(e) The checks required by paragraphs (a) and (b) of this AD may be performed by the owner/operator holding at least a private pilot certificate as authorized by section 43.7 of the Federal Aviation Regulations (14 CFR 43.7), and must be entered into the aircraft records showing compliance with this AD in accordance with section 43.11 of the Federal Aviation Regulations (14 CFR 43.11).

(f) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

(g) An alternative method of compliance or adjustment of the compliance times that provides an equivalent level of safety may be approved by the Manager, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas 67209. The request shall be forwarded through an appropriate FAA Maintenance Inspector, who may add comments and then send it to the Manager, Wichita Aircraft Certification Office.

NOTE 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Wichita Aircraft Certification Office.

(h) The hose check and replacement required by this AD shall be done in accordance with the following applicable service bulletins:

- REIMS/CESSNA Service Bulletin (SB) CAB96-21, dated October 18, 1996; Model Affected: F406

- Cessna Aircraft Company SB CQB96-3, dated October 18, 1996; Model Affected: 425

- Cessna Aircraft Company SB SEB96-15, dated October 18, 1996; Models Affected: 150, 150A, 150B, 150C, 150D, 150E, 150F, 150G, 150H, 150J, 150K, 150L, 150M, A150K, A150L, A150M, F150F, F150G, F150H, F150J, F150K, F150L, F150M, FA150K, FA150L, FRA150L, FRA150M, 152, A152, F152, FA152, 172, 172A, 172B, 172C, 172D, 172E, 172F, 172G, 172H, 172I, 172K, 172L, 172M, 172N, 172P, 172Q, FP172, F172D, F172E, F172F, F172G, F172H, F172K, F172L, F172M, F172N, F172P, FR172E, FR172F, FR172G, FR172H, FR172J, FR172K, 175, 175A, 175B, 175C, P172D, R172E(T41), R172F(T41), R172G(T41), R172H(T41), R172J, R172K, 172RG, 177, 177A, 177B, 177RG, F177RG, 180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, 180H, 180J, 180K, 182, 182A, 182B, 182C, 182D, 182E, 182F, 182G, 182H, 182J, 182K, 182L, 182M, 182N, 182P, 182Q, 182R, F182P, F182Q, FR182, R182, T182, TR182, 185, 185A, 185B, 185C, 185D, 185E, A185E, A185F, 188, 188A, 188B, A188, A188A, A188B, T188C, 206, U206, U206A, U206B, U206C, U206D, U206E, U206F, U206G, TU206A, TU206B, TU206C, TU206D, TU206E, TU206F, TU206G, P206A, P206B, P206C, P206D, P206E, TP206, TP206A, TP206B, TP206C, TP206D, TP206E, 207, 207A, T207, T207A, 210, 210-5 (205), 210-5A (205A), 210A, 210B, 210C, 210D, 210E, 210F, 210G, 210H, 210J, 210K, 210L, 210M, 210N, 210R, P210N, P210R, and T210F.

- Cessna Aircraft Company SB CAB96-15, Revision 1, October 18, 1996; Models Affected: 208 and 208B.

- Cessna Aircraft Company SB MEB96-10, dated October 18, 1996; Models Affected: T303, 310P, 310Q, 310R, T310P, 310Q, 310R, 335, 336, 337, 337A, 337B, 337C, 337D, 337E, 337F, 337G, 337H, F337E, F337F, F337G, F337H, FT337E, FT337F, FT337GP, FT337HP, FTB337, T337B, T337C, T337D, T337E, T337F, T337G, T337H, T337H-SP, M337B, P337H, 340, 340A, 401, 401A, 401B, 402, 402A, 402B, 402C, 404, 411, 411A, 414, 414A, 421, 421A, 421B, and 421C.

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Cessna Aircraft Company, Product Support, P.O. Box 7706, Wichita, Kansas 67277. Copies may be inspected at the FAA,

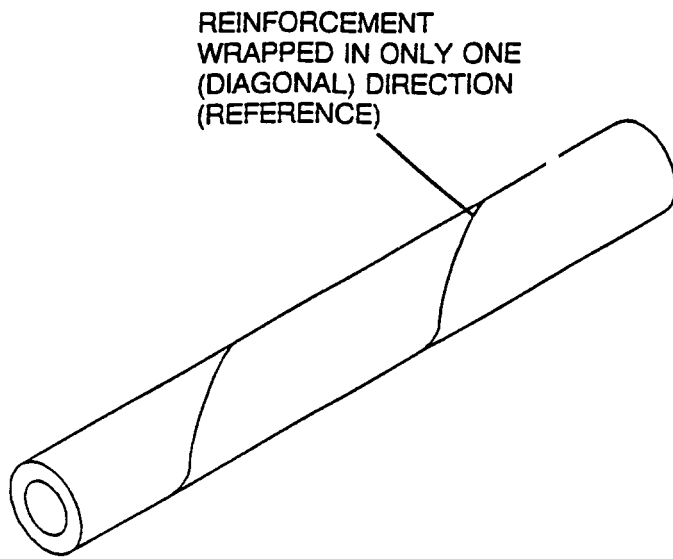
Central Region, Office of the Assistant Chief Counsel, Room 1558, 601 E. 12th Street, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

- (i) This amendment becomes effective on February 3, 1997.

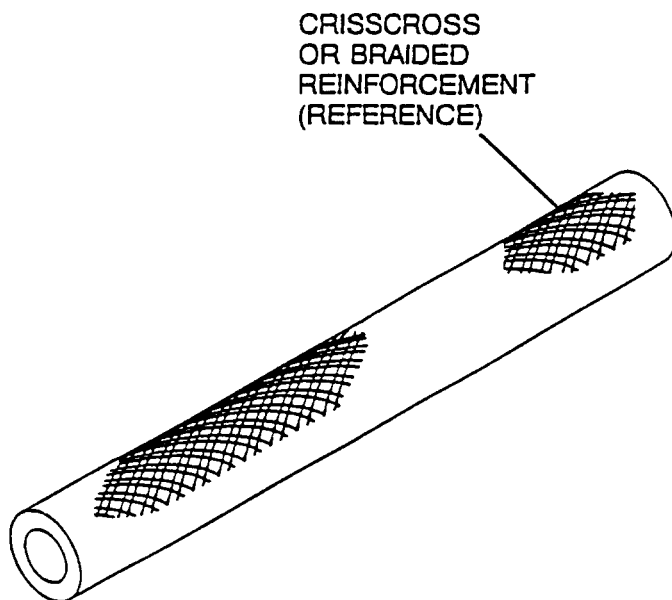
FOR FURTHER INFORMATION CONTACT:

John C. Pearson, Aerospace Engineer, FAA, Wichita Aircraft Certification Office, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas 67209; telephone (316) 946-4134, facsimile (316) 946-4407.

AD 97-01-13  
Figure 1



OLD STYLE S51-10 HOSE  
WITH REINFORCEMENT  
WRAPPED IN ONLY ONE  
(DIAGONAL) DIRECTION THE  
LENGTH OF THE HOSE  
(REMOVE AND REPLACE WITH  
REPLACEMENT STYLE HOSE)



REPLACEMENT STYLE S51-10  
HOSE WITH A CRISS-CROSS  
OR BRAIDED REINFORCEMENT  
PATTERN